

IN THE CLAIMS:

The following is a complete list of the claims. This listing replaces all earlier versions and listings of the claims.

Claims 1-100 (canceled)

Claim 101 (previously presented): An image processing apparatus which can be connected to an external apparatus via a network, said image processing apparatus comprising:

reception control means for controlling a reception process of receiving agent information including a command train in which a work flow is programmed describing a series of processes to be executed in a plurality of image processing apparatuses, wherein the work flow further describes a first image process to be executed in said image processing apparatus and a second image process to be executed in an external image processing apparatus which is different in mechanism from said image processing apparatus, and wherein the work flow can be programmed such that the second image process is executed after execution of the first image process;

control means for controlling an image processing mechanism of said image processing apparatus by executing, based on the command train included in the received agent information, a control program that controls the image processing mechanism;

memory management means for managing a memory area for executing the command train included in the received agent information;

transmission control means for controlling, responsive to said

control means terminating execution of the control program based on the command train, a transmission process of transmitting a process end notice to the external apparatus; and

obtainment means for obtaining a reply to the process end notice from the external apparatus,

wherein said memory management means releases the memory area for executing the command train included in the received agent information in response to said obtainment means obtaining the reply from the external apparatus.

Claim 102 (previously presented): An image processing apparatus according to claim 101, wherein,

said control means controls the image processing mechanism to execute a print process,

said transmission control means controls, responsive to the image processing mechanism terminating execution of the print process, a transmission process of transmitting a print end notice to the external apparatus so as to cause the display unit of the external apparatus to display a print end confirmation window, and

said obtainment means obtains the reply sent from the external apparatus in response to a user of the external apparatus entering a print end confirmation.

Claim 103 (previously presented): An image processing apparatus according to claim 101, further comprising an execution means for executing the command train to determine whether a result of processing by the image processing mechanism is an unrecoverable error, and if the result of processing is an unrecoverable error, writing the

occurrence of the unrecoverable error to a memory area which is dynamically reserved for the agent information as a data field.

Claim 104 (previously presented): An image processing apparatus which can be connected to a network comprising:

reception control means for controlling a reception process of receiving agent information including a command train in which a work flow is programmed describing a series of processes to be executed in a plurality of image processing apparatuses, wherein the work flow further describes a first image process to be executed in said image processing apparatus and a second image process to be executed in an external image processing apparatus which is different in function from said image processing apparatus, and wherein the work flow can be programmed such that the second image process is executed after execution of the first image process;

control means for controlling an image processing mechanism of said image processing apparatus by executing, based on the command train included in the received agent information, a control program that controls the image processing mechanism;

execution means for executing one of the series of processes described in the work flow to be executed in said image processing apparatus; and

transmission control means for controlling, responsive to said execution means terminating execution of the one process, a transmission process of automatically transmitting the agent information from said image processing apparatus to the external image processing apparatus so as to cause the external image processing apparatus to execute the command train based on the work flow.

Claim 105 (previously presented): An image processing apparatus according to claim 104, wherein said image processing apparatus is a print apparatus and the external image processing apparatus is a filing apparatus.

Claim 106 (previously presented): An image processing apparatus according to claim 104, wherein said image processing apparatus is a printer, and wherein the work flow is programmed such that the printer executes a print process and then transmits image data for printing to the external image processing apparatus and such that the external image processing apparatus stores the image data.

Claim 107 (previously presented): An image processing apparatus according to claim 104, wherein said transmission control means controls the transmission process to copy the agent information in whole or in part and distributes the copied agent information to at least one external image processing apparatus such that the series of processes described in the work flow may be executed in parallel.

Claim 108 (previously presented): An image processing apparatus according to claim 104, wherein the agent information controls in the external image processing apparatus a process of voluntarily releasing a memory area reserved for the agent information while retaining the image data for printing processed by the agent information.

Claim 109 (previously presented): An image processing apparatus according to claim 104, wherein the image processing mechanism includes at least one of an image filing mechanism, a scanner mechanism and a printer mechanism.

Claim 110 (previously presented): A network system including an image processing apparatus and an external apparatus, said system comprising:

input means for inputting agent information including a command train in which a work flow is programmed describing a series of processes to be executed in a plurality of image processing apparatuses, wherein the work flow further describes a first image process to be executed in said image processing apparatus and a second image process to be executed in an external image processing apparatus which is different in mechanism from said image processing apparatus, and wherein the work flow can be programmed such that the second image process is executed after execution of the first image process;

control means for controlling an image processing mechanism of said image processing apparatus by executing, based on the command train included in the agent information input by said input means, a control program that controls the image processing mechanism;

memory management means for managing a memory area for executing the command train included in the input agent information;

transmission control means for controlling, responsive to said control means terminating execution of the control program based on the command train, a transmission process of transmitting a process end notice to said external apparatus;

display control means for controlling a display process of displaying a process end confirmation window on a display unit of said external apparatus in response to the process end notice transmitted by said transmission control means;

response means for sending a reply to the transmitted process end notice from said external apparatus to said image processing apparatus; and

obtainment means for obtaining the reply sent by said response means,

wherein said memory management means releases the memory area for executing the command train included in the received agent response to said obtainment means obtaining the reply from said external apparatus.

Claim 111 (previously presented): A system including a plurality of image processing apparatuses which can be connected to a network, each image processing apparatus comprising:

reception control means for controlling a reception process of receiving agent information including a command train in which a work flow is programmed describing a series of processes to be executed in said plurality of image processing apparatuses, wherein the work flow further describes a first image process to be executed in said image processing apparatus and a second image process to be executed in an another of said plurality of image processing apparatuses which is different in function from said image processing apparatus, and wherein the work flow can be programmed such that the second image process is executed after execution of the first image process;

control means for controlling an image processing mechanism of said image processing apparatus by executing, based on the command train included in the

received agent information, a control program that controls the image processing mechanism;

execution means for executing one of the series of processes described in the work flow to be executed in said image processing apparatus; and

transmission control means for controlling, responsive to said execution means terminating execution of the one process, a transmission process of automatically transmitting the agent information from said image processing apparatus to another of said plurality of image processing apparatuses so as to cause said another image processing apparatus to execute the command train based on the work flow.

Claim 112 (previously presented): A control method for controlling an image processing apparatus which can be connected to an external apparatus via a network, said control method comprising:

a reception control step, of controlling a reception process of receiving agent information including a command train in which a work flow is programmed describing a series of processes to be executed in a plurality of image processing apparatuses, wherein the work flow further describes a first image process to be executed in the image processing apparatus and a second image process to be executed in an external image processing apparatus which is different in mechanism from the image processing apparatus, and wherein the work flow can be programmed such that the second image process is executed after execution of the first image process;

a control step, of controlling an image processing mechanism of the image processing apparatus by executing, based on the command train included in the received agent information, a control program that controls the processing mechanism;

a memory management step, of managing a memory area for executing the command train included in the received agent information;

a transmission control step, of controlling, responsive to said control step terminating execution of the control program based on the command train, a transmission process of transmitting a process end notice to the external apparatus; and

an obtainment step, of obtaining a reply to the process end notice from the external apparatus,

wherein said memory management step includes releasing the memory area for executing the command train included in the received agent information in response to the reply being obtained from the external apparatus in said obtainment step.

Claim 113 (previously presented): A control method according to claim 112, wherein,

said control step includes controlling the processing mechanism to execute a print process,

said transmission control step includes controlling, responsive to the processing mechanism terminating execution of the print process, a transmission process of transmitting a print end notice to the external apparatus so as to cause the display unit of the external apparatus to display a print end confirmation window, and

said obtainment step includes obtaining the reply sent from the external apparatus in response to a user of the external apparatus entering a print end confirmation.



Claim 114 (previously presented): A control method according to claim 112, further comprising an execution step, of executing the command train to determine whether a result of processing by the processing mechanism is an unrecoverable error, and if the result of processing is an unrecoverable error, writing the occurrence of the unrecoverable error to a memory area which is dynamically reserved for the agent information as a data field.

Claim 115 (previously presented): A control method for controlling an image processing apparatus which can be connected to a network, said control method comprising:

a reception control step, of controlling a reception process of receiving agent information including a command train in which a work flow is programmed describing a series of processes to be executed in a plurality of image processing apparatuses, wherein the work flow further describes a first image process to be executed in the image processing apparatus and a second image process to be executed in an external image processing apparatus which is different in function from the image processing apparatus, and wherein the work flow can be programmed such that the second image process is executed after execution of the first image process;

a control step, of controlling an image processing mechanism of the image processing apparatus by executing, based on the command train included in the received agent information, a control program that controls the processing mechanism;

an execution step, of executing one of the series of processes described in the work flow to be executed in the image processing apparatus; and

a transmission control step, of controlling, responsive to said execution step terminating execution of the one process, a transmission process of automatically transmitting the agent information from the image processing apparatus to the external image processing apparatus so as to cause the external apparatus to execute the command train based on the work flow.

Claim 116 (previously presented): A control method according to claim 115, wherein the image processing apparatus is a printing apparatus and the external image processing apparatus is a filing apparatus.

Claim 117 (previously presented): A control method according to claim 115, wherein the image processing apparatus is a printer, and wherein the work flow is programmed such that the printer executes a print process and then transmits image data for printing to the external the image processing apparatus and such that the external the image processing apparatus stores the image data.

Claim 118 (previously presented): A control method according to claim 115, wherein said transmission control step includes controlling the transmission process to copy the agent information in whole or in part and distributing the copied agent information to at least one external image processing apparatus such that the series of processes described in the work flow may be executed in parallel.

Claim 119 (previously presented): A control method according to claim 115, wherein the agent information controls in the external image processing apparatus a

process of voluntarily releasing a memory area reserved for the agent information while retaining the image data for printing processed by the agent information.

Claim 120 (previously presented): An office apparatus according to claim 115, wherein the processing mechanism includes at least one of an image filing mechanism, a scanner mechanism and a printer mechanism.

Claim 121 (previously presented): A computer program product embodying a program for implementing a control method of controlling an image processing apparatus which can be connected to an external apparatus via a network, said program comprising:

program code for a reception control step, of controlling a reception process of receiving agent information including a command train in which a work flow is programmed describing a series of processes to be executed in a plurality of image processing apparatuses, wherein the work flow further describes a first image process to be executed in the image processing apparatus and a second image process to be executed in an external image processing apparatus which is different in mechanism from the image processing apparatus, and wherein the work flow can be programmed such that the second image process is executed after execution of the first image process;

program code for a control step, of controlling an image processing mechanism of the image processing apparatus by executing, based on the command train included in the received agent information, a control program that controls the processing mechanism;

program code for a memory management step, of managing a memory area for executing the command train included in the received agent information;

program code for a transmission control step, of controlling, responsive to said control step terminating execution of the control program based on the command train, a transmission process of transmitting a process end notice to the external apparatus; and

program code for an obtainment step, of obtaining a reply to the process end notice from the external apparatus,

wherein said memory management step releases the memory area for executing the command train included in the received agent information in response to said obtainment step obtaining the reply from the external apparatus.

Claim 122 (previously presented): A computer program product embodying a program for implementing a control method of controlling an image processing apparatus which can be connected to a network, said program comprising:

program code for a reception control step, of controlling a reception process of receiving agent information including a command train in which a work flow is programmed describing a series of processes to be executed in a plurality of image processing apparatuses, wherein the work flow further describes a first image process to be executed in the image processing apparatus and a second image process to be executed in an external image processing apparatus which is different in function from the image processing apparatus, and wherein the work flow can be programmed such that the second image process is executed after execution of the first image process;

program code for a control step, of controlling an image processing mechanism of the image processing apparatus by executing, based on the command train

included in the received agent information, a control program that controls the processing mechanism;

program code for an execution step, of executing one of the series of processes described in the work flow to be executed in the image processing apparatus; and

program code for a transmission control step, of controlling, responsive to said execution step terminating execution of the one process, a transmission process of automatically transmitting the agent information from the image processing apparatus to the external image processing apparatus so as to cause the external apparatus to execute the command train based on the work flow.

Claim 123 (previously presented): A computer-readable memory medium which stores a program for controlling an image processing apparatus which can be connected to an external apparatus via a network, said memory medium comprising program codes that allow the image processing apparatus to execute:

a reception control step, of controlling a reception process of receiving agent information including a command train in which a work flow is programmed describing a series of processes to be executed in a plurality of image processing apparatuses, wherein the work flow further describes a first image process to be executed in the image processing apparatus and a second image process to be executed in an external image processing apparatus which is different in mechanism from the image processing apparatus, and wherein the work flow can be programmed such that the second image process is executed after execution of the first image process;

a control step, of controlling an image processing mechanism of the image processing apparatus by executing, based on the command train included in the received agent information, a control program that controls the processing mechanism;

a memory management step, of managing a memory area for executing the command train included in the received agent information;

a transmission control step, of controlling, responsive to said control step terminating execution of the control program based on the command train, a transmission process of transmitting a process end notice to the external apparatus; and

an obtainment step, of obtaining a reply to the process end notice from the external apparatus,

wherein said memory management step includes releasing the memory area for executing the command train included in the received agent information in response to the reply being obtained from the external apparatus in said obtainment step.

Claim 124 (previously presented): A computer-readable memory medium which stores a program for controlling an image processing apparatus which can be connected to a network, said memory medium comprising program codes that allow the image processing apparatus to execute:

a reception control step, of controlling a reception process of receiving agent information including a command train in which a work flow is programmed describing a series of processes to be executed in a plurality of image processing apparatuses, wherein the work flow further describes a first image process to be executed in the image processing apparatus and a second image process to be executed in an external image processing apparatus which is different in function from the image

processing apparatus, and wherein the work flow can be programmed such that the second image process is executed after execution of the first image process;

a control step, of controlling an image processing mechanism of the image processing apparatus by executing, based on the command train included in the received agent information, a control program that controls the processing mechanism;

an execution step, of executing one of the series of processes described in the work flow to be executed in the image processing apparatus; and

a transmission control step, of controlling, responsive to said execution step terminating execution of the one process, a transmission process of automatically transmitting the agent information from the image processing apparatus to the external image processing apparatus so as to cause the external apparatus to execute the command train based on the work flow.

Claim 125 (new): An image forming apparatus which can be connected to a network, said apparatus comprising:

reception control means for controlling a reception process of receiving agent information including a command train in which a work flow is programmed describing a series of processes to be executed in a plurality of image forming apparatuses, wherein the work flow further describes a first image process to be executed in said image forming apparatus and a second image process to be executed in an external image forming apparatus which is different in function from said image forming apparatus;

control means for controlling an image forming mechanism of said image forming apparatus by executing, based on the command train included in the received agent information, a control program that controls the image forming mechanism;

execution means for executing one of the series of processes described in the work flow to be executed in said image forming apparatus; and

transmission control means for controlling a transmission process of transmitting the agent information from said image forming apparatus to the external image forming apparatus so as to cause the external image forming apparatus to execute the command train based on the work flow.

Claim 126 (new): An image forming apparatus according to claim 125, wherein the work flow can be programmed such that the second image process in the external image forming apparatus is executed after execution of the first image process in said image forming apparatus.

Claim 127 (new): An image forming apparatus according to claim 125, wherein said transmission control means controls the transmission process responsive to said execution means terminating execution of the one process.

Claim 128 (new): An image forming apparatus according to claim 125, wherein said image forming apparatus is an image output apparatus that includes a printer and the external forming apparatus is an image input apparatus that includes a filing apparatus.

Claim 129 (new): A control method for controlling an image forming apparatus which can be connected to a network, said control method comprising:



a reception control step, of controlling a reception process of receiving agent information including a command train in which a work flow is programmed describing a series of processes to be executed in a plurality of image forming apparatuses, wherein the work flow further describes a first image process to be executed in the image forming apparatus and a second image process to be executed in an external image forming apparatus which is different in function from the image forming apparatus;

a control step, of controlling an image forming mechanism of the image forming apparatus by executing, based on the command train included in the received agent information, a control program that controls the image forming mechanism;

an execution step, of executing one of the series of processes described in the work flow to be executed in the image forming apparatus; and

a transmission control step, of controlling a transmission process of transmitting the agent information from the image forming apparatus to the external image forming apparatus so as to cause the external image forming apparatus to execute the command train based on the work flow.

Claim 130 (new): A control method according to claim 129, wherein the work flow can be programmed such that the second image process in the external image forming apparatus is executed after execution of the first image process in the image forming apparatus.

Claim 131 (new): A control method according to claim 129, wherein said transmission control step includes controlling the transmission process responsive to said execution step terminating execution of the one process.

Claim 132 (new): A control method according to claim 129, wherein the image forming apparatus is an image output apparatus that includes a printer and the external forming apparatus is an image input apparatus that includes a filing apparatus.

Claim 133 (new): A computer-readable memory medium which stores a program for controlling an image forming apparatus which can be connected to a network, said memory medium comprising program codes that allow the image forming apparatus to execute:

a reception control step, of controlling a reception process of receiving agent information including a command train in which a work flow is programmed describing a series of processes to be executed in a plurality of image forming apparatuses, wherein the work flow further describes a first image process to be executed in the image forming apparatus and a second image process to be executed in an external image forming apparatus which is different in function from the image forming apparatus;

a control step, of controlling an image forming mechanism of the image forming apparatus by executing, based on the command train included in the received agent information, a control program that controls the image forming mechanism;

an execution step, of executing one of the series of processes described in the work flow to be executed in the image forming apparatus; and

a transmission control step, of controlling a transmission process of transmitting the agent information from the image forming apparatus to the external image forming apparatus so as to cause the external image forming apparatus to execute the command train based on the work flow.